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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No. : 10/713,608

Confirmation No.: 2527

Applicants : Kane

Filed : November 14, 2003

Title : SEALED HEADER AND  
METHOD OF MAKING

TC/A.U. : 2841

Examiner : Carpio, I.

Docket No. : TWC0036

Customer No. : 27268

CERTIFICATE OF MAILING  
(37 C.F.R. § 1.8(a))

I hereby certify that, on April 19, 2007, this correspondence is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the address below on the date indicated above.

By: D. Cwiklinski  
D. Cwiklinski

REFUND REQUEST UNDER 37 CFR § 1.26

MAIL STOP 16  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

On January 5, 2007, our Deposit Account No. 02-0390 was charged \$1020.00 for a three month extension of time fee.

Only one month extension of time was necessary because Applicant timely filed his response to the Final Office Action within two months of the issuance of the Final Office Action dated July 17, 2007 and the Notice of Appeal was filed within one month from the Advisory Action. A copy of Applicant's amendment and return postcard, dated September 18, 2007, is attached hereto.

A refund in the amount of \$900.00 is requested in the above identified application pursuant to 37 CFR § 1.26. Please credit the refund to Deposit Account No. 02-0390, BAKER & DANIELS LLP for the erroneously charged extension fee.

Respectfully submitted,

Ryan C. Barker

Ryan C. Barker, Reg. No. 47,405  
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01 FC:1251 120.00 DA

**AMENDMENT TRANSMITTAL LETTER (Large Entity)**

Applicant(s): Vincent M. Kane

Docket No.

TWC0036

Application No.

10/713,608

Filing Date

11/14/2003

Examiner

Ivan Hernan Carpio

Customer No.

27268

Group Art Unit

2841

Confirmation No.

2527

Invention:

**SEALED HEADER AND METHOD OF MAKING****COMMISSIONER FOR PATENTS:**

Transmitted herewith is an amendment in the above-identified application.

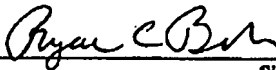
The fee has been calculated and is transmitted as shown below.

**CLAIMS AS AMENDED**

	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST # PREV. PAID FOR	NUMBER EXTRA CLAIMS PRESENT	RATE	ADDITIONAL FEE
TOTAL CLAIMS	26 -	26 =	0	x \$50.00	\$0.00
INDEP. CLAIMS	2 -	3 =	0	x \$200.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT					\$0.00

- ☒ No additional fee is required for amendment.
- ☐ Please charge Deposit Account No. \_\_\_\_\_ in the amount of \_\_\_\_\_
- ☐ A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account 02-0390
- ☒ Any additional filing fees required under 37 C.F.R. 1.16.
- ☒ Any patent application processing fees under 37 CFR 1.17.
- ☐ Payment by credit card. Form PTO-2038.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**



Signature

Dated: September 18, 2006

Ryan C. Barker  
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on

September 18, 2006

(Date)



Signature of Person Mailing Correspondence

Ryan C. Barker

Typed or Printed Name of Person Mailing Correspondence

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Kane )

Confirmation No. 2527

Application Serial No. 10/713,608 )

**CERTIFICATE OF MAILING**

Filed: November 14, 2003 )

For: SEALED HEADER AND METHOD )  
OF MAKING )

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

Group Art Unit: 2841 )

Date September 18, 2006

Examiner: Carpio, I. )

By: R. Barker  
R. Barker

Attorney Docket No. TWC0036 )

**RESPONSE TO OFFICIAL ACTION**

MAIL STOP AF  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated July 17, 2006, Applicants hereby submit a Listing of Claims which begins on page 2 of this paper and Remarks begin on page 5 of this paper.

### Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An electronic module, comprising:  
a casing defining a cavity therein, said casing having at least one opening therethrough for communication with said cavity;  
a substrate received in said cavity, said substrate having a plurality of throughholes positioned adjacent to and overlapping with said opening;  
a connector header positioned over said casing opening, said connector having a plurality of electrical terminals, with first portions positioned exterior of said cavity, and second portions extending into said cavity and into said throughholes of said substrate forming an electrical and mechanical connection therewith; and  
wherein said mechanical connection at least partially retains said connector header and substrate to said casing.
2. (Original) The electronic module of claim 1, wherein said casing is defined by a planar wall and upstanding peripheral walls, said opening extending through said planar wall, and said peripheral walls forming said cavity.
3. (Original) The electronic module of claim 2, wherein said terminal second portions are compliant pin sections.
4. (Original) The electronic module of claim 3, wherein said substrate is a printed circuit board, and said throughholes are plated and interconnected to traces on said circuit board.
5. (Original) The electronic module of claim 4, further comprising electronic components positioned within said cavity and mounted to said printed circuit board, interconnected to said traces.
6. (Original) The electronic module of claim 1, wherein said casing further comprises an upstanding sealing wall in a surrounding relation to said opening.

7. (Original) The electronic module of claim 6, wherein said connector header has a sealing groove with a complementary geometry as said upstanding sealing wall and is received therein.
8. (Original) The electronic module of claim 7, further comprising a seal member positioned within said sealing groove and in sealing contact with said sealing wall.
9. (Original) The electronic module of claim 1, wherein said connector header has a mounting surface which extends at least partially into said opening.
10. (Original) The electronic module of claim 9, wherein said header mounting surface is adhesively fixed to said substrate.
11. (Original) The electronic module of claim 9, wherein said header mounting surface is adhesively fixed to said casing.
12. (Original) The electronic module of claim 11, wherein said casing has two elongate openings, with an intermediate strap portion, said connector header having raised portions adjacent said compliant pin portions, received in said openings, and a mounting portion intermediate said raised portions.
13. (Previously Presented) The electronic module of claim 12, wherein said mounting surface is adhesively fixed to said strap portion.
14. (Original) A method of making an electronic module, comprising the steps of:  
providing a casing defining a cavity therein, said casing having an opening therethrough for communication with said cavity;  
positioning a substrate in said cavity, said substrate having a plurality of throughholes positioned adjacent to and overlapping with said opening;  
positioning a connector header over said casing opening in a mating direction, said connector having a plurality of electrical terminals, with first portions positioned exterior of said cavity, and second portions extending into said cavity and into said throughholes of said substrate forming an electrical and mechanical connection therewith;  
providing a sealing member between said casing and said header which is compressed in the mating direction, and  
retaining said connector header against said casing.
15. (Original) The method of claim 14, wherein a mechanical connection between said header and said substrate retains said connector header and substrate to said casing.

16. (Original) The method of 15, wherein said terminal second portions are provided as compliant pin sections.

17. (Original) The method of claim 14, wherein said casing is provided with an upstanding sealing wall in a surrounding relation to said opening.

18. (Original) The method of claim 17, wherein said connector header is provided with a sealing groove with a complementary geometry as said upstanding sealing wall and is received therein.

19. (Original) The method of claim 18, wherein said seal member is positioned within said sealing groove and in sealing contact with said sealing wall.

20. (Original) The method of claim 14, wherein said connector header is provided with a mounting surface which extends at least partially into said opening and is placed in contact with said substrate.

21. (Original) The method of claim 20, wherein said header mounting surface is adhesively fixed to said substrate.

22. (Original) The method of claim 20, wherein said header mounting surface is adhesively fixed to said casing.

23. (Previously Presented) The method of claim 22, wherein said casing is provided with two elongate openings, with an intermediate strap portion, said connector header having raised portions adjacent said compliant pin portions received in said openings and a mounting portion intermediate said raised portions.

24. (Original) The method of claim 23, wherein said mounting surface is adhesively fixed to said strap portion.

25. (Original) The method of claim 14, wherein said connector header, casing and substrate are attached to each other simultaneously.

26. (Original) The method of claim 25, wherein said connector header, casing and substrate are attached to each other by a single movement towards each other along said mating axis.

## Remarks

### Claim Rejections

Claims 1-9, 14-20, and 25-26 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,652,292 to Pratt (hereinafter "Pratt").

Claim 1 requires "a substrate received in said cavity." Applicant previously noted that "the official action cites circuit board 50 as the substrate, receptacles 20 as openings, and housing 16 as defining a cavity. Circuit board 50 sits atop and across receptacles 20 and is not within housing 16. Accordingly, the cited substrate is not received within the cited cavity." The Examiner responded by stating that "The cavity is formed through the top of housing 16, within the cavity is a platform 54 on which circuit board 50 is located, by visual inspection of Fig. 3 we note that when the circuit board is on platform 54, it is within the cavity formed in the housing 16." Applicant respectfully disagrees with the Official Action's visual inspection of Fig. 3 of Pratt. A visual inspection of Fig. 3 fails to definitively show the height of platform 54 with respect to the outer wall of housing 16. More importantly, claim 1 also requires that "at least one opening therethrough for communication with said cavity." The Official Action cites receptacles 20 as the openings and state that "The cavity is formed through the top of housing 16." The Official Action appears to equate the claimed openings and cavity. As claimed, the openings and the cavity are distinct pieces in communication with each other, not one that is the same piece as or a sub part of the other.

Additionally, applicant previously noted that claim 1 requires "second portions [of the header electrical terminals] ... [and] said substrate forming an electrical and mechanical connection therewith... wherein said mechanical connection at least partially retains said connector header and substrate to said casing." In response to Applicant's previous response, the Official Action states "the header, terminals, and circuit board comprise a single unit connected primarily through the press fit connection of the terminals to the circuit board, therefore when the lower ends of the terminals are inserted through elements 46, 48, and 44 the terminals are aiding in the retention of the substrate (50) and header (12) to the casing (16)." As shown in Fig. 5, and acknowledged by the Official Action, the electrical and mechanical connection between the terminals and the circuit board is already present in Fig. 5. Furthermore, the substrate 50 and header 12 are coupled to each other but not to the casing 16 in Fig. 5. The mechanical coupling of the substrate 50 to the header 12 is independent of their coupling to casing 16. Accordingly,



the mechanical connection between the terminals and the substrate fails to "at least partially [retain] said connector header and substrate to said casing."

For at least the above reasons, Applicant believes that the proposed rejection of claim 1 is improper and respectfully requests its withdrawal. Claims 2-13 depend from claim 1 and are therefore believed to be in condition for allowance. Such allowance is respectfully requested.

Claim 2 depends from claim 1 and requires "said casing is defined by a planar wall and upstanding peripheral walls, said opening extending through said planar wall, and said peripheral walls forming said cavity." The claimed construction is not consistent with the Official Action's construction stating that "the cavity is formed through the top of housing 16." The only parts that are formed through the top of housing 16 are receptacles 20 which have been identified by the Official Action as the openings. Accordingly, the interpretation of Pratt used in claim 1 cannot read on claim 2. Claim 2 is believed to be in condition for allowance.

Claim 8 depends from claim 7 and requires "a seal member positioned within said sealing groove and in sealing contact with said sealing wall." In rejecting claim 7, the Official Action stated "the connector header has a sealing groove (Fig. 5, the groove between elements 38 and 36)." Then, in rejecting claim 8, the Official Action stated "Pratt teaches a seal member (Fig. 5, element 36) positioned within said sealing groove." Having element 36 define a side of the sealing groove as stated in rejecting claim 7 is inconsistent with having element 36 then be within the sealing groove as stated in claim 8. The definition of element 36, or 38 as the sealing member is further inconsistent with the rejections made with respect to claim 14, as discussed below. Accordingly, claim 8 is believed to be in condition for allowance.

Claim 9 depends from claim 1 and requires "said connector header has a mounting surface which extends at least partially into said opening." The Official Action states that "Pratt teaches that the header has a mounting surface (Fig. 5, element 38) which extends at least partially into said opening." In rejecting claim 1, the Official Action cited receptacle 20 as the opening. Element 38, the now cited mounting surface, fails to extend at least partially into receptacle 20. Accordingly, claim 9 is in condition for allowance.

As previously noted, Claim 14, similarly to claim 1, requires "positioning a substrate in said cavity." As discussed above, a visual inspection of Fig. 3 fails to definitively show the height of platform 54 with respect to the outer wall of housing 16. Additionally, claim

14 requires "providing a sealing member between said casing and said header which is compressed in the mating direction." The official action states, that element 38 is the proper element that reads on "the sealing member," and that "with this correction, it becomes evident that simply due to gravitational forces element 38 is compressed between the header and the casing." A reading of Pratt col. 3, ll. 41-49 shows that peripheral flange 38 is a part of header connector 12. Accordingly, flange 38 cannot be compressed between the header (of which it is a part) and the casing. Furthermore, the argument is inconsistent with statements made in the Official Action with respect to claims 9 and 20, stating that element 38 is part of the header and with respect to claims 8 and 18, stating that the header includes a groove defined between elements 36 and 38. For at least the above reasons, Applicant believes that the proposed rejection of claim 14 is improper and respectfully requests its withdrawal. Claims 15-26 depend from claim 14 and are therefore believed to be in condition for allowance. Such allowance is respectfully requested.

Additionally, claim 15 includes the limitation that "a mechanical connection between said header and said substrate retains said connector header and substrate to said casing." This limitation is similar to one present in claim 1. The arguments put forth above with respect to that limitation are repeated here with respect to claim 15.

Claim 19 includes the limitation of "said seal member is positioned within said sealing groove." Such a limitation is similar to the limitation of claim 8. The arguments put forth above with respect to that limitation are repeated here with respect to claim 19.


Claim 20 requires that "said connector header is provided with a mounting surface which extends at least partially into said opening and is placed in contact with said substrate." The Official Action cites element 38 as the mounting surface. As noted with respect to claim 9, element 38 fails to extend into the opening. Furthermore, element 38 fails to contact the substrate. Accordingly, claim 20 is believed to be in condition for allowance.

With respect to the rejections under §103, all so rejected claims depend from an independent claim that is believed to be in condition for allowance.

If necessary, Applicants request that this response be considered a request for an extension of time appropriate for the response to be timely filed. Applicants request that any required fees needed beyond those submitted with this response be charged to the account of Baker & Daniels, Deposit Account No. 02-0390.

The Examiner is invited to contact the undersigned at the telephone number provided below should any question or comment arise during consideration of this matter.

Respectfully submitted,

By:   
Ryan C. Barker  
Reg. No. 47,405

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Mailed: September 18, 2006  
Inventor: Vincent M. Kane  
Serial No. 10/713,608  
Filed: November 14, 2003  
Title: SEALED HEADER AND METHOD OF MAKING  
Attorney Docket No.: TWC0036

☒ Amendment Transmittal Sheet (in duplicate)  
☒ Amendment

The stamp of the Patent Office hereon indicates receipt  
of the above-identified documents.

RCB/dc

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SEP 25 2006

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